

AMENDMENTS TO THE CLAIMS

Please make the following amendments to the claims:

1. (Cancelled)

2. (Currently Amended) A system capable of transmitting voice and Ethernet data signals over a wide-area network (WAN) circuit; said WAN ~~network~~ circuit having a line rate; said system comprising:

an Ethernet physical layer interface for connecting a Subscriber Premise device between an Ethernet LAN and said WAN ~~network~~ circuit for providing packets representing Ethernet data signals to said WAN ~~network~~ circuit;

a telephone line interface for connecting a standard telephone line equipment to said WAN circuit ~~network~~; said telephone line interface containing a CODEC that digitizes analog signals for transmission of voice packets to said WAN circuit ~~network~~;

a fragmenting device containing a software algorithm rendered effective by the presence of packets from said telephone line interface for fragmenting Ethernet data signals into labeled packets interspersed with said voice packets ~~from said telephone line interface~~ as the Ethernet data signals pass it ~~passes~~ therethrough; said labeled packets having a fragmented packet size determined by said line rate; and

a packet flow device configured to mix said labeled packets and said voice packets into a stream provided to said WAN circuit.

3. (Cancelled)

4. (Currently Amended) The system as defined in claim [[3]] 2 in which the size of

the fragmented packet is chosen to ensure that the packets from said telephone line can have an arrival rate of 64 Kbps regardless of the network line speed or Ethernet traffic.

5. (Currently Amended) The system as defined in claim [[3]] 2 in which the size of the fragmented packet is chosen from the following table:

<u>Line Rate</u>	<u>Fragmented Packet Size</u>
2,320 Kbps	554 Bytes
2,064 Kbps	490 Bytes
1,552 Kbps	362 Bytes
1,040 Kbps	234 Bytes
784 Kbps	170 Bytes
528 Kbps	106 Bytes
400 Kbps	74 Bytes
272 Kbps	42 Bytes

6-7. (Cancelled)

8. (New) A system for multiplexing Ethernet packets and voice signals over a wide-area network (WAN) circuit connecting a subscriber premise and a provider premise, the WAN circuit having a line rate, the system comprising:

an Ethernet interface configured to communicate data packets to and from an Ethernet LAN;

a telephone line interface coupled to telephone equipment and configured to produce voice packets;

a fragmentation device configured to receive Ethernet packets from the Ethernet interface and, responsive to the presence of the voice packets at the telephone line interface, to fragment Ethernet packets into labeled data packets, wherein the size of the labeled data packets is based on the WAN line rate;

a multiplexer configured to multiplex the labeled data packets with the voice packets into a stream; and

a WAN interface configured to communicate the multiplexed stream of voice packets and labeled data packets over the WAN circuit.

9. (New) The system of claim 8, wherein the multiplexer is further configured to multiplex the labeled data packets with the voice packets into a stream according to a priority scheme whereby one voice packet alternates with one labeled data packet.

10. (New) The system of claim 8, wherein the size is further based on a sampling rate at which the voice packets are produced.

11. (New) The system of claim 8, wherein the data packets are variable in size.

12. (New) The system of claim 8, wherein the voice packets are fixed in size.

13. (New) A method for multiplexing Ethernet frames and voice signals over a wide-area network (WAN) circuit connecting a subscriber premise and a provider premise, the method comprising:

receiving Ethernet frames;

receiving voice packets;

responsive to the presence of voice packets, fragmenting each of the Ethernet frames into a plurality of data packets having a size calculated to ensure that the transmission time of the data packet over the WAN circuit is no longer than the transmission time of a voice packet;

labeling each of the data packets with an identifier indicating where the fragmented data packet fits within the Ethernet frame; and

multiplexing the labeled data packets and the voice packets over the WAN circuit.

14. (New) The method of claim 13, wherein the labeling step further comprises:
labeling each of the data packets with an identifier indicating the fragmented data packet completely contains the Ethernet frame.

15. (New) The method of claim 13, wherein the labeling step further comprises:
labeling each of the data packets with an identifier indicating the fragmented data packet contains a first portion of the Ethernet frame.

16. (New) The method of claim 13, wherein the labeling step further comprises:
labeling each of the data packets with an identifier indicating the fragmented data packet contains a last portion of the Ethernet frame.

17. (New) The method of claim 13, wherein the size is based on the WAN line rate.

18. (New) The method of claim 13, wherein the size is based on a sampling rate at which the voice packets are produced.

19. (New) The system of claim 13, wherein the multiplexing step further comprises:
multiplexing the labeled data packets with the voice packets over the WAN circuit according to a priority scheme whereby one voice packet alternates with one labeled data packet.